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# **BERKELEY ENERGY RESOURCE DIRECTORY**

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UNIVERSITY OF CALIFORNIA



**Energy Organizations,  
Services and Businesses**

FIRST PRINTING

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City of Berkeley

DRAWING ON THE COVER BY MICHAEL SNODGRASS

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# Introduction

Berkeley citizens live in a city that is as rich in energy resources as anywhere in the country. Furthermore, the type of resources in Berkeley fit with the city's goal of maximizing energy self-reliance. While we don't have any oil wells or power plants, we have businesses that will install attic insulation, solar systems and wind systems. We have organizations that will teach you to install your own energy conservation measures, build your own solar collector, fix your bike or remodel your whole house for energy savings. We've got programs that weatherize homes for low-income people and help pay utility bills. PG&E will conduct a free energy audit on your home or business and, in a brand new program, give you a zero-interest loan to finance your energy saving measures. You can recycle newspapers, bottles and cans in front of your residence, or buy used windows, kitchen sinks and other materials recycled from the dump. You can even give your used computer to a youth program to be recycled. The "Berkeley Energy Resource Directory" lists some 90 businesses, organizations and programs that can provide you with these and other energy-related services.

This directory is one of the major projects completed for the City's Energy Self-Reliance Year of 1981. In January of last year, committees on conservation, renewable resources, economic development and other subjects met to discuss projects for Energy Year; the need for an energy resource directory emerged as a top priority. It stemmed from two assumptions: 1) Berkeley has a wealth of energy resources available to its citizens, and 2) most people are not aware that the resources exist. The Berkeley Energy Resource Directory will serve to make this information more widely available.

As with most Energy Year projects, this directory would not have been possible without the participation of volunteers and the donation of supplies and services. An Energy Year Market Study Committee working with the Resource Directory group, designed a questionnaire for eliciting information on Berkeley energy businesses and organizations. Energy Office volunteers and interns conducted most of the interviews. Information from the surveys was then organized, written up, edited and supplemented as time progressed. Leslie Fox, a VISTA volunteer in the Energy Office, was the chief coordinator and editor of the project. She distilled the information gathered and written by over a dozen people into a coherent document.

Others who deserve thanks for their contribution to the research, writing, editing, production and review of this directory include:

Dan Burke, Paul Candau, Richard Carlsen,  
Shelia Coad, Forrest Craven, Bob Delaney,  
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Amy Skews-Cox, Harry Stein, Jackie Steinman,  
and Marie Whitt.

Please see the last page of the directory to request further material or information from the City of Berkeley's Energy Office, and to inform us of entries which should be added to future editions.

**Dusky Rhodes Pierce**  
**Berkeley Energy Officer**

## NOTICE

The authors and the City of Berkeley do not guarantee the accuracy of any entry in this directory or the qualifications or expertise of any persons or firms listed. To be included in the directory, the firms had to state that 10% of their business was done in Berkeley and that their business fit one or more of the directory's categories. The firms and individuals were not selected for quality or reputation. The descriptions of the firm's work were provided solely by the firms themselves and their statements were not independently verified.

Before you contract to have work done, you should check your contractor and his license status by contacting:

Contractors State License Board  
1020 N. Street  
Sacramento, CA 95814  
(916) 366-5153

Inquiries and complaints can also be directed to:

Consumer Complaint and Protection Coordinators  
Contractors State License Board  
or  
The Better Business Bureau

# Berkeley City Government

The following commissions, advisory bodies, ordinances and programs affect energy policy making in the City of Berkeley.

## COMMISSIONS

### 1. BERKELEY ENERGY COMMISSION

**Chairperson:** Carl Blumstein  
**Liaison:** Dusky Rhodes-Pierce  
644-6042



Advisory to Council on matters relating to energy conservation and alternative energy development in Berkeley.

### 2. PLANNING COMMISSION

**Chairperson:** Jack Bonno  
**Liaison:** Mary Reynolds  
644-6534

Advisory to Council on physical/economical development (Master Plan, Zoning Ordinances, special plans); acts on Environmental Impact Review documents, Subdivision Ordinance applications and design review.

### 3. SOLID WASTE MANAGEMENT COMMISSION

**Chairperson:** Steve Jawetz  
**Liaison:** Michael Baumann  
644-6241

Functions are to develop a local plan for reducing solid waste generated; prepare a Solid Waste Management Plan; and to study the problems of solid waste management.

#### **4. TRANSPORTATION COMMISSION**

**Chairperson:** Elizabeth Deakin

**Liaison:** Sylvia Toth

644-6534

An advisory to Council on matters relating to transportation: reviews the City's capital improvement needs in the area of streets, bicycle, and pedestrian pathways. Evaluates the Legislation before the California State Legislature that addresses funding of transportation needs, advising the City Council of potential effects on the City.

#### **5. MAYOR'S COMMUNITY ENERGY COUNCIL**

**Liaison:** City of Berkeley Energy Office

Dusky Rhodes-Pierce

644-6042

Citizens representing local community, business and neighborhood organizations meet to share energy ideas and information; and to provide the Energy Commission and City Council with community participation and consultation on energy issues. Any organization supporting MCEC's general energy conservation and renewable resource goals may join. Individuals may participate in working task forces.

### **ORDINANCES**

#### **BERKELEY'S RESIDENTIAL ENERGY CONSERVATION ORDINANCE**

Berkeley's Residential Energy Conservation Ordinance (RECO) which went into effect June 20, 1981, requires that residential property owners take five energy conservation steps before they may sell their property. RECO applies to all residential structures or units in Berkeley for which a construction permit was issued before July 1, 1978.

The five requirements are:

- Insulate ceilings
- Seal furnace ducts
- Insulate water heaters
- Install low flow showerheads
- Insulate hot water pipes in pumped recirculating water-heating systems

Free RECO brochures detailing requirements and procedures can be obtained from the City Housing Department, the Energy Office, PG&E, and most real estate agencies.

## **SOLAR HEATING AND WIND PERMIT WAIVERS**

When installing solar heating or wind systems in Berkeley, the fees for plumbing and electrical permits are waived.

### **PROGRAMS**

#### **1. BERKELEY COMMUNITY ACTION AGENCY**

2180 Milvia, 4th Floor, Energy Program  
Berkeley, CA 94704  
644-6080

Administers two energy assistance grants for qualifying low income residents of Berkeley. One funding source allows for the distribution of kits which contain a hot water heater insulation blanket, caulking, weatherstripping, a low-flow showerhead and switchplate gaskets. Another program helps low income residents pay their utility bills.

**2. BERKELEY ENERGY ACTION MOBILIZATION (BEAM)**

City of Berkeley, Energy Office  
2121 McKinley Avenue  
Berkeley, CA 94703  
644-6040

Free city-wide workshop program demonstrating household energy conservation measures including insulation, low-cost and no-cost energy saving steps. Information on free energy assistance programs offered by the Community Action Agency for qualifying low income residents, the various financial, educational and technical assistance programs offered by PG&E, and the Federal and State Energy Conservation and solar tax credits will also be presented. Any group of 10 people - be it a church group, school, neighborhood association or private house party - can arrange for a trained leader to give a BEAM workshop.

**3. BERKELEY ENERGY OFFICE**

2121 McKinley Avenue  
Berkeley, CA 94703  
644-6042  
**Contact:** Dusky Rhodes-Pierce

The city's Energy Office provides Berkeley citizens with information and referral services on local energy organizations, businesses and programs.

**4. TOOL LENDING LIBRARY**

City of Berkeley Public Library  
6901 Russell Street  
(at the South Berkeley Branch Library)  
644-6101

Hours: Tuesday and Wednesday: 1-8p.m.  
Thursday and Friday: 1-6p.m.  
Saturday: 10-6p.m.

Tool lending service for use by residents with a Berkeley Library Card. All of the tools needed to weatherize or install a solar heating system are available plus more.

## 5. YOUNG ADULT PROJECT

1890 Alcatraz Avenue  
Berkeley, CA 94703  
644-6226

Offers free household weatherization services to eligible low income Berkeley residents. Weatherization assistance includes: attic insulation, caulking cracks and joints, replacing broken window panes and weatherstripping doors and windows. In addition to weatherization services, the Young Adult Project also offers free minor home repairs to senior and disabled persons. Y.A.P. also gives seminars on specific topics related to household energy conservation and provides training for youth in household weatherization.



# **California State Governmental Agencies**

The following state agencies deal with energy related concerns.

## **1. CALIFORNIA ENERGY COMMISSION**

1111 Howe Avenue  
Sacramento, CA 95825

The following offices at C.E.C. can provide information on solar and conservation.

- Building and Appliance Standards  
(916) 920-6006
- Conservation (916) 920-6091
- Publications Office (916) 920-6216
- Public Information Office (800) 822-6241
- Solar Hotline (800) 952-5670

## **2. CALIFORNIA ENERGY EXTENSION SERVICE**

1600 Ninth Street  
Sacramento, CA 95814  
(916) 323-4388

A federally funded program created to provide individuals with training, advice, and technical assistance on energy conservation and the use of renewable sources of energy. C.E.E.S. funded 20 community based organizations in its first year of operation. They provided funding for the Berkeley Tool Lending Library, workshops at Berkeley Public Libraries, VISTA volunteers, and the Associated Students Co-op Energy Program.

**3. CAL TRANS**

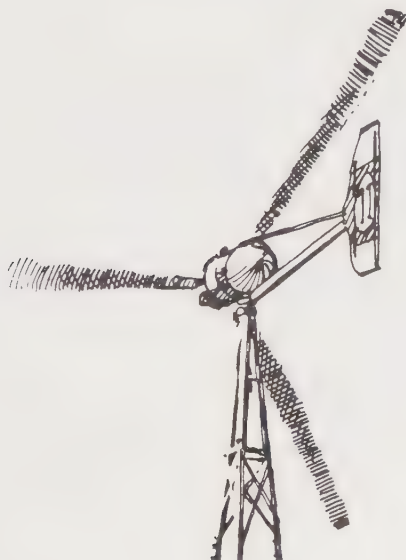
P. O. Box 3366  
Rincon Annex  
San Francisco, CA 94119  
557-1840

Provides general information on transportation including the Peninsula Commuter Service, ride sharing, road conditions, bicycle organizations, and the like.

**4. OFFICE OF APPROPRIATE TECHNOLOGY**

State of California  
1600 Ninth Street  
Sacramento, CA 95814  
(916) 445-1803

Founded by Governor Brown, Jr. to assist and advise the government and the people of California on low-cost, resource-conserving alternatives in the areas of waste treatments, energy supply, food production, and related issues.



# Consumer Protection

The following is a basic list of consumer protection and information services for conservation and solar products.

## 1. CALIFORNIA ENERGY COMMISSION

1111 Howe Avenue M.S. 70  
Sacramento, CA 95825  
800-952-5670

- **California Solar Hotline** - Answers questions regarding solar and other renewable energy systems.
- **SUNDIAL** - Gives information on available credits.
- **TIPSE** - (Testing and Inspection Program for Solar Equipment). Currently testing solar collectors.

## 2. CAL SEAL

926 JAY St. Building, Suite 516  
Sacramento, CA 95814  
916-443-1877

Reviews technical information on a system to determine its qualification for state credit and general information. Also reviews qualifications for solar contractors in the state.

## 3. CONSERVATION AND RENEWABLE ENERGY INQUIRY AND REFERRAL SERVICE

P. O. Box 8900  
Silverspring, M.D. 20907  
800-523-2929

A federal information and referral service regarding conservation and renewable energy systems.

**4. DEPARTMENT OF CONSUMER AFFAIRS**

Division of Consumer Services

Energy Unit

1020 N. Street, Room A-556

Sacramento, CA 95814

916-322-5756

800-952-5567

Handles product complaints on solar, insulation, energy home improvements.

**5. OFFICE OF CONSUMER AFFAIRS**

Department of Energy

Washington, D.C. 20585

For general information on energy products:  
202-252-5141

For information specifically regarding solar:  
800-523-2829

**6. PACIFIC GAS & ELECTRIC CO.**

2111 Grove Street

Berkeley, CA 94704

● **APPLIANCE EFFICIENCY MARKETING**

800-792-8000

Provides information to customers regarding the energy efficiency of major home appliances such as refrigerators, washing machines, dishwashers, etc.

● **ATTIC INSULATION INSPECTION**

800-792-8000

Provides free inspection of completed attic insulation jobs to assure that customers receive full value for their

investment. If the job does not meet the company's workmanship standards, PG&E will help the customer obtain corrections by the installing contractor.

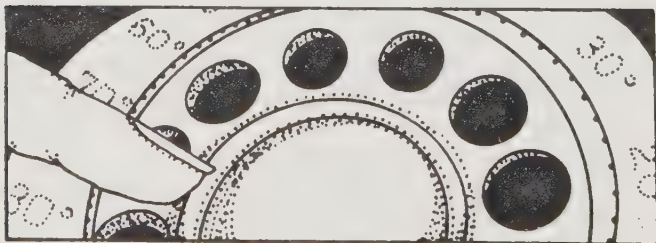
- **ENERGY CONSERVATION CENTER**  
800-792-8000

Hours of operation:

Monday through Thursday: 8 a.m. - 9 p.m.  
Friday and Saturday: 8 a.m. - 5 p.m.

Trained specialists answer questions about insulation and other conservation measures via a toll-free telephone line. Conservation literature and program applications are mailed to customers upon request.

Commercial and industrial customers needing assistance from PG&E engineers on technical matters may call 800-652-1363, Monday through Friday.



# Education

Berkeley is very fortunate to have such a wide spectrum of effective organizations involved in educating the public on various aspects of energy issues. Any organization that conducts tours, offers workshops, seminars, classes, and/or serves as a resource center in the Berkeley area is listed below.

## 1. ALTERNATIVE ENERGY COLLECTIVE

5829 Adeline Street

Oakland, CA 94608

658-9686

**Contact:** Keith Rutledge

Also known as the Solar Station, Inc., AEC occupies the site of an abandoned gas station which AEC has transformed into a 100 percent energy self-reliant building complete with a garden, solar greenhouse, windmill and well water pump, and solar water heating. The AEC demonstrates various energy conservation methods to its visitors and offers workshops on a wide variety of topics covering everything from household energy conservation and weatherization to solar water heater construction, solar greenhouse construction, and alcohol fuel production. AEC also has a newsletter which is available for members.

## 2. BERKELEY ENERGY ACTION MOBILIZATION (BEAM)

City of Berkeley, Energy Office

2121 McKinley Avenue

Berkeley, CA 94703

644-6040

**Contact:** Leslie Fox, Energy Office

Free city-wide workshop program demonstrating household energy conservation measures including insulation, low-cost and no-cost energy saving

steps. Information on free energy assistance programs offered by the Community Action Agency for qualifying low-income residents, the various financial, educational and technical assistance programs offered by PG&E, and the Federal and State conservation solar tax credits will also be presented. Any group of 10 people - be it a church group, school, neighborhood association or private house party - can arrange for a trained leader to give a BEAM workshop.

### **3. BERKELEY ENERGY OFFICE**

2121 McKinley Avenue  
Berkeley, CA 94703  
644-6042

**Contact:** Dusky Rhodes-Pierce

The city's Energy Office provides Berkeley citizens with information and referral services on local energy organizations, businesses and programs.

### **4. BERKELEY PLANNING ASSOCIATES**

3200 Adeline Street  
Berkeley, CA 94703  
652-0999

**Contact:** Ken Egel

Specializes in designing comprehensive energy conservation programs for various types of residential groups including multi-unit apartment dwellings, dormitories, commercial complexes, single houses, and cooperative living situations. Also conducts energy management and consulting programs for realtors, property management firms, tenants, and students.

**5. CONSERVATION AND RESOURCE STUDIES  
RESOURCE CENTER**

Giannini Hall, Room 33  
U.C. Berkeley  
Berkeley, CA 94720  
642-6746  
**Contact:** Linda Banda

The library provides access to written materials on environmental and energy issues to the community. It is open to the general public.

**6. ECOLOGICAL DESIGN GROUP**  
c/o Department of Architecture  
232 Wurster Hall  
U.C. Berkeley  
Berkeley, CA 94720  
642-5023

Facilitates networking within the University and the East Bay community. Group holds weekly meetings at Room 232 Wurster Hall and invites the public to discuss energy and environmental issues.

**7. ECOLOGY CENTER**  
2701 College Avenue  
Berkeley, CA 94705  
548-2220  
**Contact:** Zoe Tatoya

A nonprofit community group providing a free curb-side recycling program. They also have a bookstore and a library, publish booklets and a monthly newsletter, and serve as a clearinghouse for environmental information. New members are always welcome.

**8. ENERGY AND RESOURCES GROUP**

U.C. Berkeley  
Building T4  
Berkeley, CA 94720  
642-1640

**Information Specialist:** Rob Stern

U.C. Graduate program with academic emphasis on comprehensive energy studies; research emphasis on renewable resources, conservation, and energy/environmental issues.

**9. ENERGY PLANNING GROUP**

3124 Shattuck Avenue  
Berkeley, CA 94705  
848-6466

Researches energy plans and is working on designing a process which could be implemented here in Berkeley to develop a comprehensive energy plan for this community.

**10. FARALLONES INTEGRAL URBAN HOUSE**

1516 Fifth Street  
Berkeley, CA 94710  
525-1150

**Contact:** Margaret Shockley

A model for environmentally sound self-reliant living in an urban setting. The House demonstrates how an average household with limited yard space can utilize alternative energy systems and grow its own food throughout the year. Demonstrations include active and passive solar water and space heating, large organic gardens, aquaculture pond and tanks for fish and vegetable culture, raising chickens and

bees in the city, grey water and composting and low-flow toilet systems, and other types of recycling. The educational program includes many classes and workshops on topics such as gardening, solar, recycling, aquaculture, and animal raising and nutrition as well as ongoing public tours, internships, and volunteer positions. A bookstore provides many current publications on self-reliance topics.

**11. FUTURE RESOURCES ASSOCIATES, INC.**

2000 Center Street, Suite 418  
Berkeley, CA 94704  
526-5111

**Contact:** Robert J. Budnitz

Conducts training programs for residential and commercial energy auditing and retrofits. Also sponsors symposia in alternative and renewable energy technologies.

**12. LAWRENCE HALL OF SCIENCE**

University of California  
Berkeley, CA 94720  
642-5132

**Contact:** The Information Desk

Hours: Daily 10-4:30 p.m.  
Thursday 10-9:00 p.m.

The Science Center is open to the public. Offers films, workshops, and educational programs on alternative energy sources as well as other topics of science. There is an admission fee. School groups are also encouraged.

13. **NORTHERN CALIFORNIA SOLAR ENERGY ASSOCIATION**  
P. O. Box 886  
Berkeley, CA 94701  
843-4306

Holds monthly meetings around the northern part of the state (usually within 100 miles of the Bay Area) on diverse topics having to do with solar energy and conservation. The organization publishes a free monthly newsletter for members. All the meetings are free to the general public.

14. **OWNER BUILDER CENTER**  
1824 Fourth Street  
Berkeley, CA 94710  
848-5950  
**Contact:** Kalman Stein

Offers several courses: house building and remodeling which cover all phases of construction from foundation to roof; house design; plan drawing; solar installation; cabinet making. In addition they offer seminars and hands-on workshops on specific topics, and a variety of consultation services, as well as a materials supply service for individuals interested in building or remodeling their own energy efficient homes.

15. **PACIFIC GAS & ELECTRIC CO.**  
2111 Grove Street  
Berkeley, CA 94704  
849-2770  
**Contact:** Ann McCrea

● **Community Cooperative Conservation**

Provides help for local energy conservation projects such as energy fairs, exhibits,

meetings, forums, and other special programs conducted by the community. PG&E works with governmental agencies, Chambers of Commerce, service clubs, private industries and other groups to help coordinate such programs.

PG&E also provides consumer information representatives to make presentations to community organizations.

- **Pamphlets & Kits**

PG&E has booklets explaining everything from conservation tax credits to insulation. Some of the pamphlets that are available in the local office include the following:

- 'Know Where Your Energy Dollar Goes'
- 'How to Give Your Pilot the Summer Off'
- 'Apartment Dweller's Handbook'
- 'Energy Conservation Programs, 1981'
- 'Insulate, Save Energy'
- 'The Money Saver's Guidebook'
- 'Plain Talk About Energy Costs'
- 'Meter-Minding Meals for Two'
- 'Plan your PG&E Bill Kit'
- 'PG&E Will Buy Your Power'

- **PG&E's U.C. Berkeley Energy Conservation Program**

849-2770

**Contact:** Jeff Wood, Candy Canning

Since 1975, PG&E has conducted an energy conservation program on the U.C. Berkeley campus, with fraternities, sororities, dorms and co-op's. Involves an energy savings competition among like living groups with a grand prize going to the group that saves

the most energy compared to their usage in 1975. Cumulative savings to date are 20%. Cash prizes are awarded to groups achieving at least a 15% savings. Two full-time students, employed part-time by PG&E, promote and monitor the competition. Internships are available for student residents in the living groups who want to closely monitor the residences' consumption.

16. **UNIVERSITY OF CALIFORNIA,  
BERKELEY, EXTENSION**  
2223 Fulton Street  
Berkeley, CA 94720

Public Information Office: 642-3112

Offers evening courses and weekend workshops for a fee throughout the year. The program regularly offers courses in energy and natural resources.

17. **URBAN ECOLOGY**  
1939 Cedar Street  
Berkeley, CA 94709  
548-7801  
**Contact:** Richard Register

Focuses on city planning and design with consideration of alternative energy and the environment. Holds conferences on integral neighborhoods, energy and the city, ecological cities, and the like. They are currently working on several projects involving land use and transportation issues. Creek restoration, slow streets, integral neighborhoods, and reducing dependence on automobiles are some of the projects currently underway.

**18. VISTA COMMUNITY COLLEGE**

2020 Milvia Street  
Berkeley, CA 94704  
841-8431

**Contact:** Michael Mills

Offers an AA/AS Degree/Certificate program in energy and environmental technologies. The following degrees/certificates are available: Sanitation/Public Health Technologies, Land Use Management, and Energy Technology. The courses are free to all California residents and are offered at night at convenient locations in Berkeley.

**19. Weather Seal**

512 Foothill Blvd.  
Oakland, CA 94606  
835-5450

**Contact:** Charles Drain

Offers energy seminars to schools, businesses and community groups.

**20. YOUNG ADULT PROJECT**

1890 Alcatraz Avenue  
Berkeley, CA 94703  
644-6226

In addition to offering free weatherization services to low income Berkeley residents, YAP offers seminars on specific topics related to household energy conservation. Young Adult Project also provides training for youth in household weatherization.

# Finance

One of the major obstacles to the performance of energy savings measures and the utilization of renewable energy resources is financing. Although a \$500 investment could save a household over five times that much in a decade, the investment is never made because of the lack of \$500. The following section describes financing opportunities geared to energy investments. It includes opportunities available through commercial lending institutions, utility and governmental loan and grant programs and tax credits.

## COMMERCIAL LENDING INSTITUTIONS

Twin Pines and Continental Savings and Loan Associations offer savings accounts which are earmarked to finance solar heating installations. Normally when you deposit money into a savings account you have no idea where or for what purpose your money is being used, whereas money deposited into these accounts will be made available by the two commercial lending institutions specifically for solar improvement loans.

### **Continental Savings and Loan Association**

2099 Market Street

San Francisco, CA 94114

861-1515

#### ● **Solar T-Bill Account**

Like all T-Bills, Solar T-Bills have a six-month maturity and require a minimum deposit of \$10,000. There is only one difference between a Solar T-Bill and a regular six-month savings certificate; your Solar T-Bill is used exclusively to finance solar heating installations.

Solar T-Bills deposited in the Safe Energy Fund are used by Continental Savings to make solar loans up to 20 years maturity at interest rates 1-1/2 percent above those paid to depositors.

- **Solar T-Notes**

If you wish to deposit less than \$10,000, you may open a 30-month Solar T-Note account with a minimum deposit of \$1,000.

**Twin Pines Federal Savings and Loan Association**

2905 Telegraph Avenue  
Berkeley, CA 94705  
848-7923

There are three options to choose from in opening a Solar Saver Fund account at this lending institution; all of them are fully insured by the FSLIC and have the same terms and regulations as accounts offered at most other lending institutions with the one difference being that these funds are used specifically for solar energy installations.

It should be noted that Twin Pines stipulates the solar company the loan recipient may contract to do the solar work.

- **Solar Certificate**

This is a 2-1/2 year account with a \$500 minimum deposit. This account guarantees the interest rate for 2-1/2 years.

- **Solar T-Bill**

This is a six-month account which requires a \$10,000 minimum deposit. As with the Solar Certificate Account, this account pays the maximum interest allowed by law.

- **Solar All Savers Certificate**

This is a 1-year term account which pays the highest allowable interest and allows up to \$1,000 per individual and up to \$2,000 per married couple, filing a joint return of tax-free interest.

### LOANS AND GRANTS

#### **BERKELEY COMMUNITY ACTION AGENCY**

City of Berkeley  
2180 Milvia Street  
Berkeley, CA 94704  
644-6080

Administers a program to help eligible low income residents pay their utility bills. During the fall of 1981, \$100.00 checks were distributed to qualifying low income Berkeley residents.

#### **PACIFIC GAS AND ELECTRIC CO.**

77 Beale Street San Francisco, CA 94106  
800-792-8000

- **Insulation Financing**  
800-792-8000

## ● **Demonstration Solar Financing**

Under a CPUC decision, PG&E is authorized to provide cash quarterly payments and low interest financing to promote the installation of solar domestic water heating systems in homes and rental units. The program is intended to make financial incentives available to owners of single family homes, apartments, condominiums, and other multi-family dwellings during the next three years. As of winter 1981, most of the money has already been awarded. There is, however, money for multi-family dwellings still available as of the time of this directory printing.

## ● **PG&E Will Buy Your Power**

A recent Federal law requires utilities to purchase power from small energy producers. If you produce your own power by any of the following methods:

- Solar
- Wind
- Hydro-electric
- Cogeneration
- Biomass
- Solid Waste Conversion

and have some extra, PG&E will buy the surplus from you at 'avoided costs' prices. 'Avoided costs' are defined as those which PG&E can avoid by not having to either produce the power itself or buy it from other utility suppliers. The avoided costs are higher than the rate the average household pays PG&E for power.

**PACIFIC GAS AND ELECTRIC CO.**

c/o Pacific Gas Energy Conservation Center  
215 Market Street, 3rd Floor  
Attention: ZIP Program  
San Francisco, CA  
800-292-8000

**ZERO INTEREST PROGRAM (ZIP) - Starting April 15, 1982**

Offers no interest loans up to \$3,500 for certain residential and apartment insulation and other energy conservation measures.

There are six conservation measures that do not require a PG&E audit and are eligible for a loan of up to \$1,000. They are:

1. Attic and ceiling insulation
2. Weatherstripping
3. Caulking
4. Low-flow showerheads
5. Duct wrapping
6. Water heater blankets

Once these measures have been taken, customers may be eligible for up to \$2,500 in additional loans, provided a PG&E Residential Conservation Service (RCS) home audit shows the measures to be economic. Any of the following measures may apply:

7. Thermal windows
8. Storm windows
9. Wall insulation
10. Floor insulation
11. Clock thermostat
12. Fluorescent light conversion
13. Intermittent Ignition Device (I.I.D.)

The loans are repaid at zero interest in the following manner:

Single-family homeowners repay ZIP loans in 50 equal monthly installments starting the month after they receive the loan.

Low-income persons, landlords, and renters repay in 100 equal monthly installments.

### TAX CREDITS

The following chart provides a general outline of State and Federal Tax Credits that are available to taxpayers who install residential conservation measures and/or renewable resource (such as solar) measures.

Please note that this directory provides general information and is not intended as tax advice. It is also based on information as of the time of printing: new tax laws or new interpretations may render this information obsolete.

A tax credit is a dollar amount a taxpayer may subtract directly from the computed tax after all other calculations have been made. A \$100 tax credit lowers a taxpayer's taxes by \$100. A deduction, on the other hand, is subtracted from the taxpayer's tax bracket. In a 20 percent tax bracket, a \$100 deduction saves a taxpayer \$20.

- For more information on the Federal tax credits, call your local I.R.S. office.
- For more information on the State tax credits, call your local Franchise Board.

## RESIDENTIAL CONSERVATION TAX CREDIT

### STATE

#### AMOUNT:

40% tax credit.

May receive a \$10 credit for a minimal expenditure of \$25 on conservation measures. The maximum amount of a tax credit one may receive is \$1,500 which is 40% of a \$3,750 expenditures on residential conservation measures.

Any amount received from a federal energy credit must be deducted from the state credit.

#### WHO

##### QUALIFIES?

\*Homeowners

\*Renters with at least 3 years remaining on their lease.

\*Owner or part owner of a multi-family dwelling may claim the credit in proportion to the number of units served by the measure.

#### WHAT

##### QUALIFIES?

1. Ceiling and Attic Insulation
2. Weatherstripping
3. Caulking and Sealing
4. Water Heater Insulation
5. Low-Flow Showerhead Devices
6. Heating and Cooling Duct Insulation
7. Pool Covers for Swimming Pools and Hot Tubs
8. Energy Audits

Numbers 1, 4, 5, 6 are required by Berkeley's Residential Energy Conservation Ordinance. (See page 6 ).

#### WHEN TO

##### FILE

The same taxable year the measures were installed.

## **FEDERAL**

15% tax credit.

May receive a \$10 credit for a minimal expenditure of \$70 on residential conservation measures. The maximum amount of a federal tax credit one may receive is \$300 for a \$2,000 expenditure on residential conservation measures.

\*Homeowners

\*Renters (No lease specifications are necessary)

\*Must be the principal place of residence. Only the original users of the qualifying equipment may file for the credit.

1. Ceiling/Wall/Floor Insulation
2. Storm Doors and Windows
3. Caulking and Weatherstripping
4. Duct/Pipe Insulation
5. Clock Thermostat
6. Furnace Modifications that Increase Fuel Efficiency
7. Automatic Ignition Devices
8. Energy Meters

Unused credits may be applied to the next tax year, but not over to December 1987.

## SOLAR TAX CREDITS

### STATE

**AMOUNT:** 55% tax credit.  
The maximum amount of a credit is \$3,000  
If the system qualifies for federal tax credits, the state credit would be reduced so that the combined effective credit does not exceed 55% of the cost of a qualified solar energy system.

### WHO

**QUALIFIES?** \*Homeowners  
\*Renters with at least 3 years remaining on their lease.  
\*Owners or part owners of multi-family dwellings.

### WHAT

**QUALIFIES?** \*Domestic, recreational, therapeutic or service water heating.  
\*Space conditioning (passive and active)  
\*Production of electricity (photovoltaics)  
\*Solar mechanical energy  
\*Wind energy for the production of electricity or mechanical work  
\*Charges, cost of acquiring a solar easement and some monthly lease payments.

### SPECIAL NOTES

\*Hot Tubs: The credit is less than 55%. It is 45% for 1981, 35% for 1982, and 25% for 1983. In all of these cases the credit for the solar system may not exceed \$3,000.  
\*Proposition 7: In 1980 the voters passed an amendment which states that property tax liability will not be increased if a new solar or wind system is added.  
\*Taxpayers may elect to amortise the solar investment over a period of either 12 or 60 months instead of claiming the credit.

## **FEDERAL**

40% tax credit.

The maximum amount of a credit is \$4,000 for expenditures made through 1983.

For years before 1980, there is a 30% credit for the first \$3,000 plus 20% credit for \$2,000-10,000. The cumulative maximum credit allowable is \$4,000.

Both renters and homeowners, provided the expenditure was on their principal place of residence.

- \*Qualified solar heating systems (active and passive)
- \*Windmills for producing energy (generally electricity) for residential use.
- \*Geothermal devices (equipment to distribute the natural heat in rocks or water).
- \*Labor costs properly allocable to the on-site preparation, assembly or installation of such property.

# Household Energy Conservation

Most of the homes in Berkeley were built when heating costs were about one-sixth what they are today; energy efficiency was not a high priority. Now as heating costs escalate, individuals are finding that they can no longer afford to ignore the cracks around uncaulked or loose fitting windows and doors, uninsulated attics, water heaters which allow expensive heat to be lost, or inefficient household appliances. Increasingly, people are beginning to consider 'weatherizing' their homes.

This section assists individuals in selecting weatherization materials, household energy efficiency audits, and installers.

For information on available weatherization do-it-yourself workshops, see the section entitled "Education", page 15.

The section entitled "Financing" outlines possible tax credits the taxpayer may be entitled to for installing energy conservation measures in their residences. See page 29.

The Finance section also lists loans and grants which are available for residential weatherization purposes.

## WEATHERIZATION MATERIALS

The following is a shopping list of the most common household weatherization materials that when properly installed save energy. All can be found at local hardware stores.

### Conserve Space Heating

Ceiling insulation

Wall insulation

Floor insulation

Basement/Crawlspce insulation

## Conserve Space Heating (Con'd)

Storm windows

Thermal shades/drapes

Weatherstripping (doors & windows)

Caulking (doors & windows)

Fireplace plug

Switchplate & outlet gaskets

Intermittent ignition device

Furnace duct insulation

Furnace tune-up

Furnace filters

## Conserve Hot Water

Water heater insulation blankets

Low-flow showerheads

Faucet aerators

Pipe insulation



## AUDITS

A thorough audit collects data on a home's structure, the equipment in it, and the occupant's energy-use habits. The information is then used to make specific recommendations on which measures are cost effective for that particular house. There are several basic energy saving measures that would be economic to implement on virtually every Berkeley house. (See numbers 1-6 on PG&E's Zero Interest Program, p. .) For people who want to go further than the basics, or to look into utilization of renewable energy resources, energy audits are an important step.

### **1. BAYFIELD ENTERPRISES, LTD.**

3834 Telegraph Avenue  
Oakland, CA 94609  
658-0606

**Contact:** Gordon Bayfield

Performs energy audits and is involved in designing, remodeling and retrofitting for energy conservation.

### **2. BERKELEY PLANNING ASSOCIATES**

3200 Adeline Street  
Berkeley, CA 94703  
652-0999

**Contact:** Ken Egel

Specializes in assessing the energy efficiency of multi-unit apartment dwellings, commercial complexes, single family homes, cooperative living situations, and dormitories.

**3. ENERGY MANAGEMENT SERVICES**

3200 Adeline Street  
Berkeley, CA 94703  
415-652-8063

**Contact:** Doug Fielding

Specializes in assessing the energy efficiency of multi-unit apartment dwellings, commercial buildings, single-family homes, and university housing. Can manage entire conservation effort, including retrofit and consumption monitoring.

**4. FUTURE RESOURCES ASSOCIATES, INC.**

2000 Center Street, Suite 418  
Berkeley, CA 94704  
526-5111

**Contact:** Robert J. Budnitz

Designs and uses state of the art computer programs for energy conservation audits for commercial and residential buildings.

**5. HOME ENERGY SERVICES**

3234 Encinal Avenue  
Alameda, CA 94501  
523-5654

**Contact:** Dave Park

Residential energy audit focusing on energy loss through cracks around doors and windows and the house's shell. Uses special equipment to measure and quantify air leakage.

**6. PACIFIC GAS & ELECTRIC CO.**

2111 Grove Street  
Berkeley, CA 94704

Offers the following free weatherization audits and services for anyone who resides in PG&E territory and calls in requesting one.

All PG&E auditors carry PG&E ID cards with photos on them. Anybody who claims to be representing PG&E without these cards is an imposter. PG&E will be pleased to identify the identity of an employee. Call 849-2770 for employee verification.

- Attic Insulation Inspection  
800-792-800
- Commercial and Industrial Audits  
800-792-8000
- Do-It-Yourself Audits  
232-7363
- Residential Conservation Service  
Home Audits  
232-7363
- Small Business Audits  
835-8500

**7. E. V. ROMERO and E. R. PRICE**

P. O. Box 3115  
Berkeley, CA 94704

Performs general and specific energy audits for commercial and residential buildings.

**8. DON SIMON**

2353 Vine Street

Berkeley, CA 94708

237-1381 or 841-6500 X365 (messages)

**Contact:** Don Simon

Energy auditor who provides energy conservation management consultation for residential and commercial buildings.

**9. THE SOLAR CENTER**

1115 Indiana Street

San Francisco, CA 94107

957-9660

**Contact:** Patty Henetz

Performs energy audits.

**10. Weather Seal**

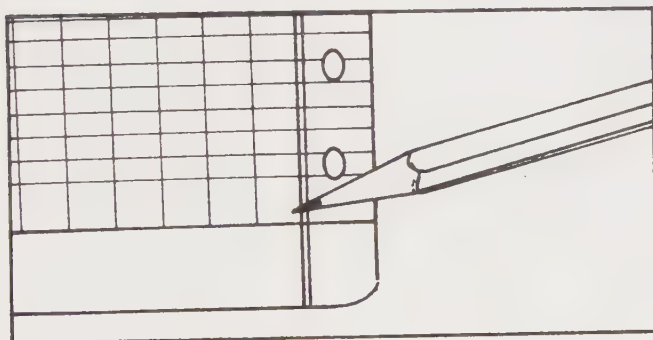
512 Foothill Blvd.

Oakland, CA 94606

835-5450

**Contact:** Charles Drain

Performs energy audits.



## Household Weatherization Contractors & Services

The following list of businesses weatherize houses in Berkeley. In general, weatherization projects include: the weatherstripping and caulking of doors and windows, repair of broken windows, insulation of water heater tanks, attics, ducts, installation of low-flow showerheads and furnace tune-ups. Some also perform audits.

### **1. ALLIED INSULATING SERVICES, BERKELEY**

Lic. #256522  
521 Norvell Street  
El Cerrito, CA 94530  
527-4287

### **2. C and T INSULATION**

Lic. #415175  
12400 San Pablo Avenue  
Richmond, CA 94705  
223-8749

### **3. CENTRAL INSULATION**

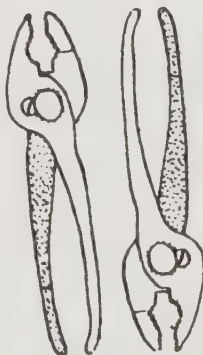
Lic. #320010  
5612 Central Avenue  
Richmond, CA 94804  
524-4484

### **4. CERRINDONO PLUMBING**

Lic. #386411  
2180 Dwight Way  
Berkeley, CA 94704  
843-8245

### **5. HOME INSULATION**

Lic. #397-746  
1009 MacDonald Avenue  
Richmond, CA 94801  
236-3027



**6. INSULATION WORKS, INC.**

Lic. #399741  
1805 - 2nd Street  
Berkeley, CA 94710  
644-3333

**7. JEVONS PLUMBING AND HEATING**

Lic. #277473  
1516 University Avenue  
Berkeley, CA 94703  
843-6378

**8. OAKLAND INSULATION CONTRACTORS**

Lic. #244061  
763 - 46th Avenue  
Oakland, CA 94601  
534-6092

**9. PERFECTION SOLAR AND INSULATION**

Lic. #371271  
411 N. Buchanan Circle  
Pacheco, CA 94553  
234-2636  
**Contact:** Michael Blessing

**10. SOLAR CENTER**

Lic. #351123  
1115 Indiana Street  
San Francisco, CA 94107  
957-9660

Performs energy cost reduction device  
installations.



**11. YOUNG ADULT PROJECT**

1890 Alcatraz Avenue

Berkeley, CA 94703

644-6226

**Contact:** Charles Drain

Offers free household weatherization services to eligible low income Berkeley residents. Weatherization assistance includes: insulation of attic and water heater, caulking cracks and joints, replacing broken window panes and weatherstripping doors and windows. In addition to weatherization services, the Young Adult Project also offers free minor home repairs to senior and disabled persons.



# Newsletters

The following items are a sampling of some of the major newsletters published throughout the country on energy related issues. These have been selected because they are geared to the layperson and are relatively inexpensive.

## 1. ENERGY CONSERVATION BULLETIN

Energy Conservation Coalition  
1412 Sixteenth Street, Northwest  
Washington, D.C. 20036  
(202) 797-6880

**Cost:** Annual Subscription \$25

This newsletter provides information on successful community conservation initiatives, technical developments, events in Washington, and other updates of energy related programs.

## 2. THE NEIGHBORHOOD WORKS

Center for Neighborhood Technology  
570 West Randolph Street  
Chicago, Illinois 60606  
(312) 454-0126

**Cost:** \$25 per year for individuals and non-profit groups, \$40 per year for government organizations and libraries.

Covers community development and self-reliance from the perspective of an urban neighborhood; issues addressed include energy conservation, alternative energy, and co-ops. Also includes a two page insert describing "how to" projects for easy reproduction.

**3. NORTHERN CALIFORNIA SUN**

Northern California Solar Energy Association  
P. O. Box 886  
Berkeley, CA 94701  
(415) 843-7328

**Cost:** Membership rates: Regular \$15,  
Household \$20, Student/Retired \$8,  
Corporate \$50

This monthly publication includes technical and general solar articles; features on local solar projects; reviews of policy issues, legislative progress, and utility programs; renewable energy book reviews; a calendar of meetings; and advertising by Northern California solar businesses.

**4. RAIN**

Journal of Appropriate Technology  
2270 N.W. Irving Street  
Portland, Oregon 97210  
(503) 227-5110

**Cost:** \$10 per year

Monthly newsletter with articles on appropriate technology, extensive book reviews.

**5. SELF-RELIANCE**

Institute for Local Self-Reliance  
.1717 - 18th Street NW  
Washington, D.C. 20009

**Cost:** Individuals, \$8, Institutions, \$15

Bi-monthly newsletter on issues regarding urban self-reliance. Specializes in energy, urban agriculture, economic development and waste utilization. Includes information on research, policy issues, model local programs and book reviews.

**6. SOLAR AGE**

Solar Vision, Inc.  
Church Hill  
Harrisville, N.H. 03450

**Cost:** \$20 per year

The official monthly magazine of the American Section of the International Solar Energy Society; includes articles, reviews, and news on solar energy and related topics.

**7. SOLAR GREENHOUSE DIGEST**

Solar Greenhouse Digest  
P. O. Box 2626  
Flagstaff, AZ 86003

**Cost:** \$7 per year

An international look at greenhouses, both attached and unattached designs, for heat and food production.

**8. SUN TIMES**

Solar Lobby  
1001 Connecticut Avenue, Fifth Floor  
Washington, D.C. 20036

**Cost:** \$15 per year

Up-to-the-minute reports on national solar policy, analyses of topical issues, reports on successful local programs, reviews.

9. **TRANET**

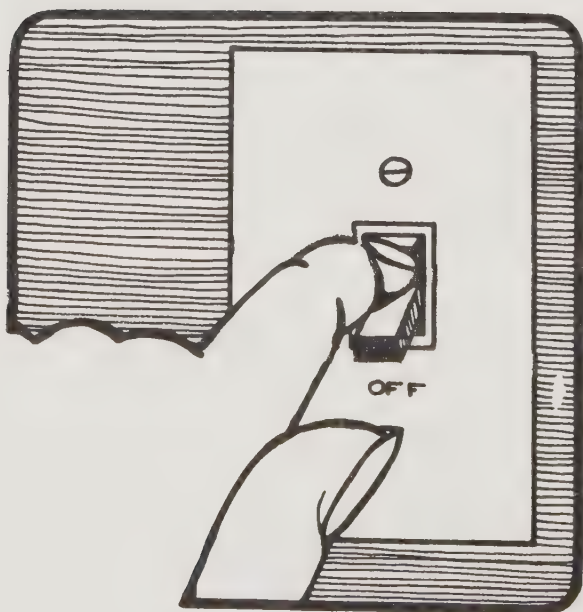
Transitional Network for Appropriate/  
Alternative Technologies (TRANET)

P. O. Box 567

Ranseley, ME 04970

**Cost:** \$15 per year for membership

Distributed to members of TRANET; promotes appropriate technology and networking.



# Recycling

Many of the materials we use everyday can be reused. Glass, aluminum, cans, and paper can all be recycled. Besides drastically reducing the quantity of waste destined for landfills, recycling saves valuable resources and energy.

Berkeley also has organizations that salvage and recycle less traditional materials such as scrap metals and computers.

## 1. BERKELEY YOUTH ALTERNATIVES

2141 Bonar

Berkeley, CA 94702

849-1402

**Contacts:** Ed Clark, Director

Rick Eckels, Assistant Director

A nonprofit community organization which recycles paper, cardboard, glass and aluminum. They provide free curbside pickup services for businesses and also have a special computer recycling program.

## 2. THE BUY BACK

Corner of Second & Gilman Streets

Berkeley, CA

The Buy Back will pay individuals cash for all of their recyclable materials including aluminum, newspaper, cardboard, glass and tin.

The Buy Back is the recycling component of the City of Berkeley's Solid Waste Management Center and is operated by the Community Conservation Center. The opening of the site is scheduled for the spring of 1982.

The Buy Back will also process and market all of the materials from the recycle drop off at Grove and Dwight Streets and the curbside pickup program run by the Ecology Center of Berkeley.

**3. COMMUNITY CONSERVATION CENTERS**

2304 Sixth Street  
Berkeley, CA 94710  
548-3222  
**Contact:** Mrs. Cazden

Operates a drop off center for sorted materials at Grove Street and Dwight Way. Bins are set up at this location for glass, tin, aluminum, newspaper, and cardboard.

**4. ECOLOGY CENTER**

2701 College Avenue  
Berkeley, CA 94705  
548-2220  
**Contact:** Kathy Evans

A nonprofit community group providing a free curbside recycling program. The Center will pick up your bundled newspapers, separated glass containers, aluminum and cans from right in front of your home once a month. Call the Center for a pick up schedule.

**5. E.C. OLOGY RECYCLING CENTER**

10890 San Pablo Avenue  
El Cerrito, CA 94530  
527-6078  
**Drop Off Site:**  
7501 Schmidt Lane  
El Cerrito, CA 94530

Offers two programs for Berkeley residents:

- **Buy Back Program**

527-6077 - Tape recorded message of the current prices they will pay for material.

Hours: Tuesday - Saturday 9-4:30 p.m.

Will buy back the following material:

aluminum cans, clean scrap aluminum, scrap aluminum with other metals attached to it, aluminum foil, newspapers, cardboard, green California wine bottles, metric jugs, tin cans and bottles and jars of mixed colors.

- **Drop Off and Donation of Material**

Open during daylight hours. In addition to the materials listed above, they accept oil mixed waste paper, magazines, textiles, and office paper.

**6. ENCORE**

5951 Doyle Street  
Emeryville, CA 94608  
652-6565

**Contact:** Dick Evans

A bottle cleaning business which purchases wine bottles from recycling services. A sheet describing the bottles they accept is available on request.

**7. FARALLONES INTEGRAL URBAN HOUSE**

1516 Fifth Street  
Berkeley, CA 94710  
525-1150

**Contact:** Margaret Shockley

Demonstrations of household nutrient and resource recycling including composting techniques, grey water systems, composting and low-flow toilet systems. Workshops, internships and publications are available.

**8. I & B ENTERPRISES, INC.**

890 Heinz Street  
Berkeley, CA 94710  
549-2545

**Contact:** Lita Lawrence

A waste paper company that buys and sells an assortment of paper products. Different grades and colors, boxes, cardboard and newspapers are just some of the paper products I & B processes. Also, they deal in the destruction of confidential material.

**9. McCONNELL ENTERPRISES**

2701 College Avenue  
Berkeley, CA 94705  
841-6500 Extension 303

**Contact:** Trish McConnell

Provides a free pick-up service for the recycling of business paper which includes computer paper, white and colored office paper and computer tab cards.

**10. RECOVERY RECYCLING**

2701 College Avenue  
Berkeley, CA 94705  
841-2327

A subscription home pick up recycling service for glass, metals, aluminum, cardboard, and newspaper.

**11. SAVE A TREE BAG COMPANY**

P. O. Box 862  
Berkeley, CA 94701  
524-2253

**Contact:** Kim Marienthal

The Berkeley-based Save A Tree Company produces various styles of canvas bags as an alternative to throwaway paper and plastic shopping bags.

Custom printing such as the name of the organization or business is also available. The bags are sold at stores and through environmental groups. They can be used for fundraising and membership drives.

**12. SUNRISE SALVAGE**

2210 San Pablo Avenue  
Berkeley, CA 94702  
845-4751

**Contact:** James Blackstock

A business which sells salvaged toilets, bathtubs and other plumbing supplies. In addition, they sell doors and other items for Victorian houses.

**13. URBAN ORE**

One Virginia R/W (Berkeley Landfill)  
Berkeley, CA 94702  
845-4591

**Contact:** Steve Drobinsky

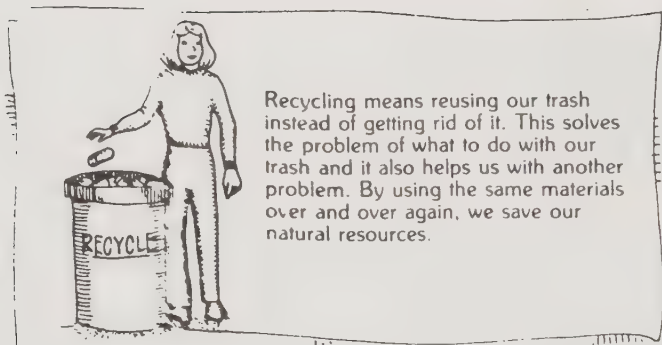
This business deals principally in the diversion and reuse of materials deposited at the Berkeley Landfill. They recover metals, both ferrous and nonferrous, plant and other organic garden debris, and waste wood. Materials commonly salvaged for resale include pipes, various plumbing items, windows, doors, and miscellaneous household items.

14. **WHOLE EARTH RECYCLING**

1100 Fifth Street  
Berkeley, CA 94710  
526-7080

**Contact:** Dan Knapp

An organization which buys and sells salvaged doors, windows, lumber, tubs, toilets, sinks, tools, furniture, mirrors, rugs, garden supplies, and much more.



# Research

The following is a list of Berkeley businesses and organizations that conduct research on an on-going basis on various aspects of energy.

## 1. ALTERNATIVE ENERGY COLLECTIVE

5829 Adeline Street

Oakland, CA 94608

658-9686

**Contact:** Keith Rutledge

Conducts on-going research on low cost methods to improve the efficiency of solar and wind systems. Alternative Energy Collective has recently begun research on experimental vehicles.

## 2. BERKELEY PLANNING ASSOCIATES

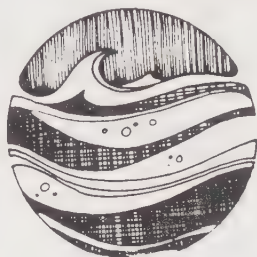
3200 Adeline Street

Berkeley, CA 94703

652-0999

**Contact:** Ken Egel

Specializes in developing energy management programs for multi-unit and single family residences. Conducted conservation research in cooperative and multi-unit properties.



## 3. CAL P.I.R.G.

2490 Channing Way, Room 220

Berkeley, CA 94704

642-9952

**Contact:** Julia London

A U. C. Berkeley student research and political lobbying group which concentrates on current consumer and environmental issues. The most recent projects undertaken by the group are:

The Bottle Deposit Legislation, Recycling, and an Energy Conservation Guide for Tenants. A solar business survey has also been published which is available free by writing. Contact Cal PIRG for the newsletter which lists new projects.

**4. EARTH LAB INSTITUTE**

1523 Fourth Street  
Berkeley, CA 94710  
526-2093

**Contact:** Peter Ziegler

Researches, develops and tests new technologies such as wind generators, and charging electric cars. Also offers monthly classes and workshops in alternative architecture, wind, and appropriate technology.

**5. ENERGY MATERIALS RESEARCH COMPANY**

2547 Eighth Street  
Berkeley, CA 94710  
644-2244

**Contact:** Sharon Wapner

Government funded to do research and development on materials for passive solar design. Specialization in unique insulation coatings and films.

**6. ENERGY PLANNING GROUP**

3124 Shattuck Avenue  
Berkeley, CA 94705  
848-6466

Researches energy plans and is working on designing a process which could be implemented here in Berkeley to develop a comprehensive energy plan for the community.

**7. FARALLONES INTEGRAL URBAN HOUSE**

1516 Fifth Street  
Berkeley, CA 94710  
525-1150

**Contact:** Margaret Shockley

Conducts research primarily on grey water systems, aquaculture, and intensive gardening. Internships are available.

**8. FUTURE RESOURCES ASSOCIATES, INC.**

2000 Center Street, Suite 418  
Berkeley, CA 94704  
526-5111

**Contact:** Robert J. Budnitz

Conducts risk assessment of energy techniques, safety studies and environmental impact studies. Also performs technical and financial analyses of renewable energy systems especially in developing countries and for advanced technologies.

**9. INQUIRING SYSTEMS, INC.**

2532 Durant Avenue  
Berkeley, CA  
843-3135

**Contact:** Loren Cole

A consulting firm offering a spectrum of services aimed at assisting other organizations to achieve economic stability. Inquiring Systems, Inc. is prepared to work in the following areas: environmental impact, weatherization, solar, greenhouse building and design, etc. One of its main functions is project design and planning.

10. **KUHN AND KUHN**  
c/o Peter Kuhn  
1859 Kathleena Avenue  
Berkeley, CA 94707  
526-7808



Conducts research on industrial and commercial energy use and cogeneration.

11. **LAWRENCE BERKELEY LABORATORY**  
1 Cyclotron Road  
Berkeley, CA 94720  
486-5771

One of the leading energy research organizations in the U.S. Research is conducted in various divisions; they are: high energy physics, energy and the environment and materials and nuclear science.

12. **URBAN ECOLOGY**  
1939 Cedar Street  
Berkeley, CA 94710  
548-7801  
**Contact:** Richard Register

Currently working on several projects involving land use and transportation issues in Berkeley. Creek restoration, slow streets, integral neighborhoods, and reducing dependence on automobiles are some of the projects currently underway.

# Solar

Residential solar can be as simple as a solar 'bread box' type water heating collector, or a water hose coil system, or as complicated as building a passive solar house. You can do it yourself or hire a Berkeley business.

The following section lists Berkeley solar contractors, and design and consulting services. For a list of Berkeley organizations that offer hands-on workshops and seminars on various solar installations, see the section entitled, 'Education', page 15 .

For information concerning available State and Federal tax credits for residential solar installation, see page 32 .

The Finance Section also lists loans and grants which are available for residential solar purposes.

## Solar Contractors

### 1. AQUARIUS CONSTRUCTION COMPANY

Lic. #394811

700 Liberty Street

El Cerrito, CA 94530

526-9604

**Contact:** Dick Santoro



At the present time this company does mostly passive solar alteration work on existing buildings.

**2. BAYFIELD ENTERPRISES**

Lic. #280111

3834 Telegraph Avenue

Oakland, CA 94609

658-0606

**Contact:** Gordon Bayfield

Does solar consultation, design and installation work. Performs energy audits, installs solar domestic hot water heating systems. They are involved in designing new buildings, remodeling, and retrofitting for renewable energy systems.

**3. BERKELEY PLUMBING COMPANY**

Lic. #293715

2160 Dwight Way

Berkeley, CA 94704

841-0883

**Contact:** Walter Wind

Installs solar domestic hot water heating systems.

**4. C and T INSULATION**

Lic. #415175

12400 San Pablo Avenue

Richmond, CA 94705

223-8749

Domestic hot water, pools, spas and limited area heating. Occasionally, free classes demonstrating how to install solar systems are given.

**5. CERRINDONO ENGINEERED HEATING**

Lic. #386411

2180 Dwight Way

Berkeley, CA 94704

843-8245

Lic. #386411

Installs solar water heating systems.

**6. DR. SOLAR**

Lic. #394480

1460 Kains

Berkeley, CA 94702

547-6527

**Contact:** Dave Roberts

Involved in a wide range of renewable energy services including design of passive solar homes, solar hot water systems and greenhouses.

**7. EHRET COMPANY**

Lic. #297612

1936 Shattuck Avenue

Berkeley, CA 94704

841-1390

**Contact:** Bert Emberton

Installs new solar domestic hot water heating systems and services existing systems.

**8. FOUR SEASONS SOLAR**

Lic. #357423

1830 Fourth Street

Berkeley, CA 94710

843-2000

Sells and installs solar hot water systems.

**9. JEVONS PLUMBING AND HEATING**

Lic. #277473

1516 University Avenue

Berkeley, CA 94703

843-6378

Installs solar heating systems.

**10. METAMORPHOSIS CONSTRUCTION CORPORATION**

Lic. #324661  
3099 Telegraph Avenue  
Berkeley, CA 94705  
548-2393  
**Contact:** Peter Golze

Licensed architects and building contractors specializing in design and installation of solar domestic hot water systems and solar space heating systems, both active and passive.

**11. PERFECTION SOLAR AND INSULATION**

Lic. #371271  
411 N. Buchanan Circle  
Pacheco, CA 94553  
234-2636  
**Contact:** Michael Blessing

Installs domestic solar systems.

**12. R. J. ANDERSON PLUMBING**

Lic. #171282  
1817 Second Street  
Berkeley, CA 94710  
845-7138

Installs solar water heating systems.

**13. SHELTERBELT**

Lic. #407145  
835 Delaware Street  
Berkeley, CA 94710  
843-7378

**Contact:** Page Nelson

Company involved in all aspects of solar systems: designs, consults, constructs, installs, and sells solar equipment.

**14. DON SIMON, Contractor**

Lic. #394508

2353 Vine Street

Berkeley, CA 94708

237-1381 or 841-6500 X365 (messages)

**Contact:** Don Simon

A certified energy auditor and electrical general and solar contractor.

**15. THE SOLAR CENTER, INC.**

Lic. #351123

1115 Indiana Street

San Francisco, CA 94107

957-9660

**Contact:** Patty Henetz

Designs, sells and installs multi-unit residential and commercial solar water heating systems.

**16. SOLARIS ENTERPRISES**

Lic. #403488

2516 Ridge Road

Berkeley, CA 94709

540-5325

**Contact:** David Shapiro

Involved in contracting and installing solar products such as domestic hot water systems, hot tubs/spas, solar space heating systems.

**17. THE SOLAR STATION**

Lic. #394811

5829 Adeline Street

Oakland, CA 94608

654-1081

**Contact:** Keith Rutledge

Consultation, design, and installation of passive and active solar water and space heating systems.

**18. SPRING MOUNTAIN ENERGY SYSTEMS, INC.**

Lic. #338320  
2617 San Pablo Avenue  
Berkeley, CA 94702  
841-3000  
**Contact:** Gloria Polanski

Consultation, design, and installation of both passive and active solar systems for homes and apartments. Retrofitting and remodeling by licensed contractors.

**19. SUN LIGHT & POWER CO.**

Lic. #B-326203  
1035 Folger Avenue  
Berkeley, CA 94710  
845-2997

Commercial and residential solar system design and construction services.

**Solar Design & Consulting Services**

**1. B.A.S.E.S.**

2512 Ninth Street, Suite 8  
Berkeley, CA 94710  
548-2185  
**Contact:** Jeff Poetsch

Solar design and consulting.

**2. FARALLONES INTEGRAL URBAN HOUSE**

1516 Fifth Street  
Berkeley, CA 94710  
525-1150  
**Contact:** Margaret Shockley

Practical demonstration of household use of solar. Consulting referrals available.

**3. MARK GORRELL**

Architect/Consultant

2020 - 10th Street

Berkeley, CA 94710

841-1090

**Contact:** Mark Gorrell

Independent solar consulting and design for passive low cost applications. Also performs consultation and design for composting and other energy/money saving ideas.

**4. OWNER BUILDER CENTER**

1824 Fourth Street

Berkeley, CA 94710

548-5950

**Contact:** Kalman Stein

Offers several courses on how to build or remodel houses, including solar installation.

**5. PACIFIC GAS AND ELECTRIC CO.**

2111 Grove Street

Berkeley, CA 94704

232-7363

Offers solar audits for customers. Auditors make basic calculations to determine whether solar retrofitting is appropriate and cost effective. Once a decision is made to install a domestic solar systems, PG&E provides a list of State certified solar contractors to customers.

PG&E also offers solar audits for commercial and industrial customers.

- 6. OTTO J.M. SMITH**  
612 Euclid Avenue  
Berkeley, CA 94708  
525-9126

A professional engineer offering consulting in solar heating, solar domestic water, solar refrigeration, solar air cooling, and solar water pasteurization.

- 7. SOL ARC**  
2040 Addison Street  
Berkeley, CA 94704  
548-7327

Architects specializing in passive solar design. Also provides consulting services for other architects concerning energy efficient design.

- 8. SOLAR ENERGY CONSULTANTS**  
1818 Harmon Street  
Berkeley, CA 94703  
654-1586  
**Contact:** Philip Caesar

Residential and commercial solar heating system design, equipment, specification and trouble-shooting.

- 9. SOLAR STATION**  
5829 Adeline Street  
Oakland, CA 94608  
654-1081  
**Contact:** Keith Rutledge

Consultation, design, and installation of passive and active solar water and space heating systems.

# Transportation

There are a number of transportation organizations located in Berkeley offering services which promote alternatives to traveling alone, making traveling more pleasant and less costly, both on the environment and household budgets.

For easy reference, the services have been grouped into three sections: Local Transportation, Long Distance Transportation, and Bicycle Transportation.

## LOCAL TRANSPORTATION

### **ALAMEDA/CONTRA COSTA (AC) TRANSIT**

508 - 16th Street  
Oakland, CA

- Information on routes: 653-3535
- Information on Passes, Discounts, and Customer Service: 891-4706
- Customer Relations: 891-4700

### **AC CONVENIENCE SERVICES**

AC acts not only as a means of transportation, but also as an important connecting link in the transportation network. From all East Bay BART stations, one can find a free transfer onto AC. From AC one can connect with the San Francisco Muni busing system, which serves the San Francisco Peninsula, including San Francisco International Airport. AC also provides services to Oakland International Airport, as well as Amtrack stations in Martinez and Oakland.

## **AC TRANSIT DISCOUNTS**

### Local Berkeley Area:

A monthly pass for \$18.00 is available at local co-op, M.B. Foods, Lucky, and Safeway supermarkets for East Bay local fare usage.

### Transbay Pass:

The monthly pass for transbay travel is available to Berkeley residents for \$36.00. The transbay pass may be purchased at the Transbay Terminal in San Francisco or 508 - 16th Street in Oakland.

### Muni Pass for Transbay Commuters:

A monthly Muni pass is available for East Bay transbay commuters for an additional \$14.00 over the cost of a transbay AC pass.

## **BAY AREA RAPID TRANSIT (BART)**

800 Madison Street  
Oakland, CA  
465-BART

## **BART CONVENIENCE SERVICES**

BART provides interchanges and free transfers with busing systems (either AC, Muni, or other shuttle services). All BART stations have elevators for the use of disabled people. Bicyclists can carry their bikes on BART by obtaining a BART bike pass. This service is not available during commute hours.

## **BART DISCOUNTS**

Senior Citizen Discounts:

\$6.00 worth of tickets for 60¢

Discounts for Disabled Individuals:

\$9.00 worth of tickets for 90¢.

These discounts may be purchased at downtown Berkeley banks.

Individuals may buy \$10.00 or \$20.00 worth of BART tickets at local Berkeley banks.

**BERKELEY TRIP** (Transportation/Rides/Parking)

1834 University Avenue

(Chamber of Commerce Building)

Berkeley, CA

644-7665/644-POOL

Co-sponsored by the City of Berkeley, University of California, Berkeley, Lawrence Berkeley Laboratory, Chamber of Commerce, and Berkeley Unified School District, TRIP assists residents and commuters to Berkeley in sharing transportation or utilizing modes of commuting other than individual cars. Programs include: route and schedule assistance for transit users, computer car pool and van pool matching, bicycle and pedestrian programs, and development of parking programs.

### **HUMPHREY GO-BART**

U.C. Berkeley

Information: 642-5149

Provides a free shuttle service from UC Berkeley campus to the Berkeley BART station at Center and Shattuck. Service runs from 7 a.m. to 2 a.m. weekdays, and Sunday evenings when school is in session. A shuttle service to Lawrence Hall of Science is also available starting at 7:00 a.m. and ending at 6:30 p.m. every weekday.

### **U.C. VAN POOL**

University of California

Berkeley, CA 94720

642-1825

For the past two years, UC Berkeley has provided van pool services to its employees and students. In the Fall of 1981, U.C. van pool will be expanded to accommodate individuals not connected with the University but who regularly commute to Berkeley. As with all van pool services, the participant pays a monthly fee which covers the cost of the vehicle and mileage.

### **LONG DISTANCE TRANSPORTATION**

There are several Berkeley-based organizations which provide economical long distance transportation services. Either they match drivers with riders or operate alternative bus systems.

## Long Distance Driver/Rider Matching Services

### **Berkeley Ride Center**

524-5404



24 hour ride line: 527-0352

Matches individuals for ride sharing.

### **Half Cost Car Pool Transit System**

845-1769

Matches individuals with rides.

### **KALX Radio Ride Finder Services**

642-KALX (24 hour hot-line)

Matches individuals with rides.

## **Alternative Bus Systems**

### **Gray Rabbit - North or South**

(services the complete West Coast)

428-2905

## BICYCLING CLUBS AND ORGANIZATIONS

There are many bicycling clubs and organizations in the Berkeley area that accommodate everyone from the novice to the experienced riders. These organizations are involved in everything from bicycle racing and touring to simple bicycle maintenance. Here is a list:

### **Berkeley Bicycle Club**

P. O. Box 817

Berkeley, CA 94701

Tom Downing - 284-7491

**East Bay Bike Coalition**

P. O. Box 1736  
Oakland, CA 94604  
834-5276

**Grizzly Peak Cyclists**

P. O. Box 9308  
Berkeley, CA 94709  
No phone

**Militant Bike Brigade**

300 Eshleman Hall  
U.C. Berkeley

**Northern California Cycling Association**

1227 Spruce Street  
Berkeley, CA 94709  
No phone

**Sierra Club**

6014 College Avenue  
Oakland, CA 94618  
841-6285

ADDITIONAL TRANSIT SERVICES FOR BICYCLES

**CalTrans Bay Area Bridge Commuter Bicycle Shuttle -  
557-1840**

**Bicycle shuttles for Golden Gate Bridge, Richmond  
Bridge and the San Francisco Bay Bridge.**

# Wind

Before rural electrification, windmills provided much of the water pumping and electrical power used on farms. Wind power lost much of its popularity however as cheaper sources of energy became available. Now as energy prices continue to soar, wind power is enjoying a rebirth. All across the country wind machines are generating electricity, producing heat and pumping water. A recent Federal law requires utilities to purchase power from windmill owners and other small energy producers. This enhances the potential profits from these sources. (See the Finance Section for details, Page 26 .)

Groups and businesses located in Berkeley who are interested in research, development and sales of wind systems include:

## 1. AERO POWER SYSTEMS, INC.

2398 - 4th Street  
Berkeley, CA 94710  
848-2710

**Contact:** Mario V. Agnello

For nearly a decade throughout the world Aero Power Systems, Inc. has been developing wind energy conversion systems. Their systems are used in residential, agricultural and commercial /industrial applications and are well suited for other uses such as telecommunications.

## 2. DR. SOLAR

P. O. Box 2277  
Berkeley, CA 94702  
547-6527

**Contact:** Dave Roberts

Designs and installs wind generators for domestic use.

**3. EARTH LAB INSTITUTE**

1523 - 4th Street  
Berkeley, CA 94710  
526-2093

**Contact:** Peter Ziegler



Researches, develops, and tests wind generators.

**4. LES MAY**

579 Grizzly Peak  
Berkeley, CA 94708  
525-1502

Sells and installs Aero Power and Jacobs Wind Turbines. These may be utilized by residential, small business, and agricultural or wind farms.

**5. SOLAR STATION**

5829 Adeline Street  
Oakland, CA 94608  
654-1081

**Contact:** Keith Rutledge

Demonstrates practical use of wind generation.

**6. WIND SYSTEMS INCORPORATED**

612 Euclid Avenue  
Berkeley, CA 94708  
525-9126

**Contact:** Otto J.M. Smith

An independent consulting engineer prepared to perform wind analysis and wind resource surveys. Also prepared to design, construct, and install 15-25 kilowatt wind electric systems.

## RESOURCE EXCHANGE

1. Please send me more information on:

City of Berkeley Energy Programs \_\_\_\_\_

Low Income Assistance \_\_\_\_\_

The Mayor's Community Energy Council \_\_\_\_\_

Berkeley's Energy Conservation Ordinance \_\_\_\_\_

2. Mail to: NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

\_\_\_\_\_

3. My firm would like to be included (or I know of a firm that should be) in the Resource Directory:

TYPE OF BUSINESS \_\_\_\_\_

\_\_\_\_\_

NAME & ADDRESS \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

4. Would you be interested in doing volunteer work for the Energy Office? If so, please write your name and phone number in question 2.



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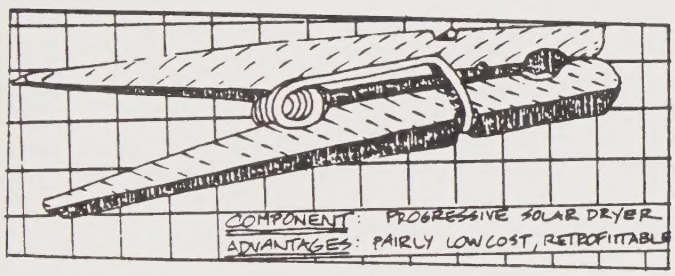
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U.C. BERKELEY LIBRARIES



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Energy Office  
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Berkeley, Ca. 94703**

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